

Title (en)
Blade tip timing

Title (de)
Schaufelspitzentakt

Title (fr)
Synchronisation de pointe d'aube

Publication
EP 2781897 A3 20151021 (EN)

Application
EP 14158714 A 20140311

Priority
GB 201305199 A 20130321

Abstract (en)
[origin: EP2781897A2] A method of zeroing displacement data derived from a rotor (2) having an array of features (4) monitored by an array of stationary timing probes (3). The method comprising steps to calculate the displacement (d j) at each probe (3) for each of at least two measured revolutions from time of arrival measurements. Each displacement (d j) is defined as a sum of a common term (P common) and a unique term (P j_unique). The set of displacements (d j) is solved for the common term (P common) and the unique terms (P j_unique). A probe offset (P j_offset) is calculated from each unique term (P j_unique). The zeroed displacements (d j) are determined by subtracting the common term (P common) and probe offset (P j_offset) from the calculated displacements (d j) for each probe (3).

IPC 8 full level
G01H 1/00 (2006.01); **F01D 17/02** (2006.01); **F01D 21/00** (2006.01); **G01M 15/14** (2006.01)

CPC (source: EP US)
F01D 17/02 (2013.01 - EP US); **F01D 21/003** (2013.01 - EP US); **G01D 3/02** (2013.01 - US); **G01H 1/006** (2013.01 - EP US); **G01M 15/14** (2013.01 - EP US); **F05D 2270/821** (2013.01 - EP US)

Citation (search report)
• [Y] US 2010161245 A1 20100624 - RAI SUDHANSHU [IN], et al
• [Y] GB 2466817 A 20100714 - ROLLS ROYCE PLC [GB]
• [A] US 2011010108 A1 20110113 - BHATTACHARYA ANINDA [IN], et al
• [A] EP 2532839 A2 20121212 - ROLLS ROYCE PLC [GB]
• [A] EP 2199764 A2 20100623 - ROLLS ROYCE PLC [GB]
• [A] EP 2136189 A2 20091223 - ROLLS ROYCE PLC [GB]

Cited by
CN114560082A; CN111579060A; CN109870283A; CN109870282A; EP3578929A1; CN110566486A; FR3082313A1; FR3027667A1; RU2686654C2; CN109790757A; US11268400B2; US10852215B2; US11333033B2; WO2016062946A1; WO2018002819A1

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
EP 2781897 A2 20140924; EP 2781897 A3 20151021; EP 2781897 B1 20200506; GB 201305199 D0 20130501; US 10281297 B2 20190507; US 2014288865 A1 20140925

DOCDB simple family (application)
EP 14158714 A 20140311; GB 201305199 A 20130321; US 201414204210 A 20140311